QUEENSLAND FARMERS' FEDERATION

Inquiry into Energy, Food and Water Security
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Joint Select Committee on
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This submission is provided to:

Joint Select Committee on Northern Australia
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Our members

- Canegrowers
- Cotton Australia
- Queensland Fruit & Vegetable Growers
- Nursery & Garden Industry Queensland
- eastAUSmilk
- Australian Cane Farmers Assocation
- Queensland United Egg Producers
- Turf Queensland
- Pork Queensland
- Bundaberg Regional Irrigators Group
- Burdekin River Irrigation Area
- Central Downs Irrigators Ltd
- Fairburn Irrigation Network
- Mallawa Irrigation
- Pioneer Valley Water Co-operative Ltd
- Theodore Water Pty Ltd
- Eton Irrigation
- Lockyer Valley Water Users

About the Queensland Farmers' Federation

The Queensland Farmers' Federation (QFF) is the united voice of agriculture in Queensland.

Our members are agricultural peak bodies who collectively represent more than 13,000 farmers who produce food, fibre and foliage across the state.

QFF's peak body members come together to develop policy and lead projects on the key issues that are important to their farmer members and the Queensland agriculture sector.

Together, we form a strong, unified voice leveraging our effectiveness by working together to drive policy and initiatives that support a strong future for Queensland agriculture.

Submission

QFF welcomes the opportunity to provide comment on the Inquiry into Energy, Food and Water Security.

We provide this submission without prejudice to any additional submission from our members or individual farmers.

Introduction

QFF has welcomed the Parliamentary Committee's focus on the critical interdependencies between water, energy, and food security in Northern Australia. Understanding these relationships at a granular level is crucial for improving the efficiency of resource production, distribution, and consumption. More importantly, it is necessary for addressing the complex legal, social, and economic factors that shape policymaking and governance in these sectors. Given the intricate nature of these interdependencies, we believe that careful consideration is required to avoid unintended consequences that could threaten agricultural production and, by extension, food security. In line with the Federal Government's commitment to reaching $100 billion in value for the agricultural sectors by 2030, we argue that boosting agricultural production in Northern Australia must be prioritised.

The interconnections between the water, energy, and food sectors are multifaceted and well-established. Food production relies heavily on both water and energy. Energy is crucial for agricultural production processes such as irrigation, fertilisation, refrigeration and livestock management. It also plays a key role throughout the entire food value chain, from processing and packaging to distribution, consumption, and disposal. Moreover, the extraction, treatment, and distribution of water require energy, while energy production and resource mining depend on water availability. These systems are further complicated by factors such as climate change, resource scarcity, population growth, and land-use change. As such, integrated strategies to address the water-energy-food nexus have never been more urgent.

QFF believes the relationship between these resources is not merely one of availability and pricing; it involves complex dynamics where the demand for one resource can increase the need for another. The cost and availability of one resource also influence the efficiency with which the others are produced. This interdependence cannot be reduced to abstract concepts like water-footprinting food production or carbon-footprinting water, food and energy supply

chains. It is the practical, day-to-day decisions in agriculture, energy, and water management that can ripple through the entire system, directly impacting food production and security. In the current policy landscape, water, energy, and food have been treated separately, often framed within an economic context rather than as interconnected components of a complex adaptive system that requires a broader, integrated approach.

Government intervention and policymaking may play a role in mitigating or exacerbating the challenges posed by the interconnectedness of these resources. However, it is the failure to recognise the impact of one resource on another that can result in policies that inadvertently harm the entire security nexus. This is particularly true at the regional and remote level, where resources like water and energy are shared. Effective policy decisions must therefore account for the shared nature of these resources and their collective impact on food security. We argue that the concept of an insecure resource extends beyond economic indicators or the condition of poor, struggling populations. Australia itself contains vulnerabilities, such as the loss of agricultural land and scarcity, that could act as catalysts, potentially escalating towards greater fragility and instability.

QFF urges the Parliamentary Committee to anticipate future growth in Northern Australia and plan strategically to boost agricultural production and secure food security. This includes focusing on infrastructure development, fostering innovation in water and energy efficiency, and ensuring that agricultural practices are resilient to the changing climate. By adopting a holistic, systems-based approach, policymakers can support the region's long-term agricultural and economic growth while safeguarding food security.

Summary of recommendations

Recommendations from this submission can be summarised as the below:

- Prioritise the simplification of the land use classification system and promote the protection of existing and potential agricultural land.
- Invest in pairing and upgrading road infrastructure as well as agricultural and renewable energy infrastructure. This is critical for ensuring the efficient and reliable transportation of food from farms to markets and the long-term viability of the nation's food supply.
- Commit to the continued investment and strengthening of biosecurity measures across all states. Ensure the protection of the nation's supply chain.
- Review the unsustainable electricity costs that undermine the viability and productivity of many agricultural businesses, and work to alleviate the burden of these high costs.
- Strategically align policies and proven technologies that promote farm-scale renewable energy solutions for integrated energy supply and demand management.
- Consider the benefits of a strategic reserve to ensure continuous energy supply during crises, mitigating short-term shortages and stabilising markets. Maintaining such reserves would align with international obligations, enhance resilience, and contribute to domestic energy security.
- Invest in water infrastructure and efficiency. Develop and upgrade water infrastructure to enable reliable access to water and minimise losses.
- Promote and empower the adoption of innovative water-efficient technologies, such as innovative irrigation systems and monitoring equipment, and water recycling initiatives that optimise water use in agriculture and reduce the impacts of climate change and water scarcity on food production.

- Adopt integrated water management policies. Implement strategies that account for the shared nature of water resources across agriculture, industry, and urban use. Policies should prioritise equitable distribution and sustainable use.
- A hierarchy of legislative procedures and roadmaps needs to be established to assist local governments in creating their own cohesive frameworks and planning procedures around these resources, providing a starting point to guide these complex decisions.
- State departments need to take a governing role in resourcing and investing in updated water and energy data collection and modelling across all catchments and communities.
- Work with industry and community to address looming insurance shortfalls and challenges for people living and operating a business in Northern Australia namely availability, affordability and appropriate insurance.

Agricultural production and food security

QFF identifies several critical elements that would ensure agricultural productivity:

- Economic issues at play include the capacity for food and meat processing in Northern Australia, rising food prices, farm profitability affected by water and energy insecurity, and the lack of infrastructure for water, transport, and distribution.
- Repairing and upgrading road infrastructure is critical for ensuring the efficient and reliable transportation of food from farms to markets. This includes both agricultural and renewable energy infrastructure, which are integral to supporting the broader agricultural supply chain.
- Ensuring robust biosecurity measures is paramount to protecting food security. Even the heightened risk of disease outbreaks, such as avian influenza, can disrupt supply chains. For example, the recent egg shortage was not caused by an outbreak but by the increased threat level of avian influenza, which led to supply disruptions. Strengthening biosecurity can prevent such vulnerabilities and protect food systems from potential risks.
- Northern Australia faces a significant challenge in preserving its agricultural land. The current land-use classification system and the lack of legislative protections for agricultural zones pose a threat to the long-term sustainability of food production. Without addressing these issues, valuable agricultural land could be lost to competing interests, undermining future food security.
- It is important to consider 'unproductive' land in agricultural land use planning. Many sectors of the agricultural industry, such as piggeries, covered feedlots, and protected or hydroponic horticulture, do not require the same land and soil types as broadacre or sugar production. As global food demand grows, agriculture will need to adapt and intensify through new systems. Long-term planning should accommodate these changes by allowing for more intensive agricultural uses on unproductive land. Prioritizing such land for these purposes will support the evolution of rural production systems.

Food security

Australia's food security situation mirrors the global trend of rising food prices. While the nation is largely self-sufficient in major food products, recent years have seen increasing concerns over the affordability and availability of food, despite our ability to import when necessary. The global rise in food demand is intensifying pressure on our agriculture sector, while the land available for food production is increasingly competing with other uses such as urban development, carbon offset initiatives, and renewable energy projects. Climate change and the degradation of natural resources further exacerbate these pressures, negatively impacting

agricultural productivity, greenhouse gas abatement efforts, and our capacity to meet domestic food demands.

Long-term factors influencing these sectors include continued population growth, with domestic population projected to reach 37 million by 2050, increasing the demand for basic staples. Changing consumer habits, will lead to higher per capita food and electricity consumption. The increasing demand for land for renewable energy developments, driven by energy security and climate change concerns, also plays a role. Rising energy and fertiliser prices have also significantly increased the costs of agricultural production, food processing, and distribution. Short-term factors include sporadic weather conditions and harvests in key surplus-producing regions of Australia, which have contributed to record-low domestic stock levels. Temporary export restrictions, intended to secure domestic supply and stabilise prices, have further complicated the situation.

Appropriate land and water planning is going to be critical for the future food security of Australians.

Energy security and its impact on food production

QFF recognises that energy security encompasses both internal and external factors. Internally, it involves balancing supply and demand while considering environmental, consumer, and political factors. Externally, it addresses the need to meet domestic energy demands that exceed local production. In the short term, energy security refers to the energy system's ability to respond rapidly to shifts in supply and demand, while in the long term, it involves timely investments to align energy availability with economic growth and environmental priorities.

Northern Queensland, in particular, faces significant challenges in ensuring the energy needs of regional economies are met. As traditional fuel reserves decline, new technologies may offer solutions, but no immediate alternatives are evident. The transition to a sustainable energy future will require strategic planning and foresight to guarantee that regional populations and industry continue to have access to reliable and affordable energy in the coming decades.

QFF identifies several critical elements contributing to the declining energy security, particularly in regional areas:

• Regional areas are often at a disadvantage when it comes to energy pricing due to historical infrastructure challenges. As electricity demand grew, centralised power systems replaced smaller, localised plants, leaving regional areas as the last to be serviced. These areas rely on long transmission lines, which increase network charges. Despite efforts to expand renewable energy infrastructure in regional areas, the intermittent nature of renewable sources means continued reliance on transmission networks to ensure a consistent power supply. Consequently, regional customers bear a disproportionate share of high electricity prices, which are driven by the costs of maintaining extensive networks that serve fewer customers.

• Unsustainable and rising electricity costs are severely impacting the viability and productivity of many agricultural businesses. A 2012 international comparison of Australia's key agricultural trading partners revealed that average electricity prices in Australia had increased by 40% since 2007. For irrigated agriculture, electricity costs have more than doubled, and for other sectors, costs have increased by as much as 300% over the same period.

• Natural gas and energy are required to produce nitrogenous fertilisers, and rising costs of these inputs will increase the costs of these fertilisers. Regulatory restrictions on fertiliser use

to address pollution issues may also have an impact. Delays or limitations in fertiliser supply can significantly disrupt cropping schedules and agricultural productivity. Given the region's reliance on imported resources, securing stable supply chains and favourable international trade agreements is crucial. These agreements ensure timely access to essential inputs and help mitigate risks from global market fluctuations or geopolitical issues. Northern Australia must guarantee that fertiliser import capacity meets the uptake requirements of agricultural production.

• Majority of domestic food transport is truck dependent and therefore fuel dependent. Transportation costs, which already represent a significant portion of the cost structure in remote and regional areas, are further strained by rising fuel prices. This puts pressure on the cost of goods, including critical supplies like food. Moreover, as supply chains become more globalised, disruptions in global energy markets, whether due to geopolitical instability or natural disasters, can further exacerbate costs and create uncertainty. Ensuring reliable energy supplies for transport infrastructure is key to maintaining the region's economic resilience and minimising the impact of such disruptions.

Recommendations:

• Review the unsustainable electricity costs that undermine the viability and productivity of many agricultural businesses, and work to alleviate the burden of these high costs. This includes supporting policies and proven technologies that promote farm-scale renewable energy solutions, such as solar PV, microgrids and farm-based Virtual Power Plants, as part of a broader strategy for integrated energy supply and demand management.

• While Northern Australia benefits from a diversified energy supply, disruptions from natural disasters or geopolitical instability highlight the need for preparedness. A strategic reserve, similar to national oil reserves, would ensure a continuous energy supply during crises, mitigating short-term shortages and stabilising markets. Supply-shock events demonstrate how reserves can buffer against supply shocks. Maintaining such reserves would also align with international obligations, enhance resilience, and contribute to domestic energy security. Given the region's vulnerabilities, investing in a strategic energy reserve is essential for long-term stability and independence.

Water security and its impact on food production

Water security is a cornerstone of food security in Northern Australia, where agriculture is heavily dependent on reliable and sustainable water resources. The QFF emphasises that access to adequate and consistent water remains critical for food production, due to its use in irrigated crops, supporting livestock and enabling food processing and distribution. Without security of water resources, agricultural productivity declines, impacting the supply and availability of fresh produce and meat for domestic consumption and export markets. As climate change intensifies and competition for water increases, ensuring water security has become one of the most pressing challenges for safeguarding Australia's food security and rural livelihoods.

The interconnected nature of water and food production demonstrates that any disruption in water availability enables a ripple effect across the entire food supply chain. Inconsistent and insufficient access to water may lead to reduced crop yields, higher production costs, and food shortages in extreme circumstances, resulting in inflated prices at the checkout threatening the accessibility of healthy whole food for Australian and global consumers. Water scarcity

exacerbates existing vulnerabilities in rural communities, constraining economic growth opportunities and undermining long-term sustainable investment in the regions. Addressing and prioritising water security is not just an agricultural or environmental concern, it is a fundamental component in protecting the sustainable production of food and fibre in Northern Australia.

QFF highlights the 'path' to food security lies in strategic investments in water infrastructure and innovative approaches to water management practices. Policies must be structured beyond increasing the volume of water; they must also address water use efficiency and equity in how water is distributed. Innovation in irrigation technology and water recycling initiatives have been proven to optimise water consumption in agriculture, while infrastructure upgrades are essential in Northern Australia to minimise losses from seasonal rainfall events improving the availability and sustainable supply of water to regional and remote communities.

Integrated water management strategies must account for the shared nature of water resources and supply systems, fostering a collaborative relationship between agriculture, industry, and communities to ensure long-term food security.

The QFF calls on the government to adopt a systems-based approach that views water and food security as inseparable priorities. Without water security, food security cannot be achieved. Addressing water security remains a key component to enable a sustainable and resilient agricultural sector in Northern Australia, delivering economic growth and prosperity in the regions.

Recommendations:

• Invest in water infrastructure and efficiency. Develop and upgrade water infrastructure to enable reliable access to water and minimise losses. Promote and empower the adoption of innovative water-efficient technologies, such as innovative irrigation systems and monitoring equipment, and water recycling initiatives that optimise water use in agriculture and reduce the impacts of climate change and water scarcity on food production.

• Adopt integrated water management policies. Implement strategies that account for the shared nature of water resources across agriculture, industry, and urban use. Policies should prioritise equitable distribution and sustainable use, fostering collaboration among stakeholders to secure water supplies for food production and long-term agricultural sustainability.

• Plan for climate and demand changes. The QFF calls on the government to proactively address the challenges of climate change, population growth, and the increasing competition for water by creating forward thinking policies.

• Promote transparent and equitable water trading systems to further develop and strengthen water trading frameworks to enable efficient and effective redistribution of water resources between agricultural users.

Governance and policy

There is an essential need for governing bodies to work more cohesively and transparently on legislative changes around water, energy, and food security. The various factors impacting availability, supply and demand of energy, water and food across differing regions and

catchments already creates a hugely complex baseline for local government planning. This is often exacerbated by minimal cross-departmental consultation on majority of water and energy policy items, an issue QFF has raised repeatedly with multiple departments in the past two years. This has led to key stakeholders consulting on various legislative changes, frameworks and roadmaps from differing government departments, which have significant overlap. This procedure is not only duplicative but disconnected. In addition to improved consultation and the streamlining of policy/planning procedures across departments, a hierarchy of legislative procedures and roadmaps needs to be established to assist local governments in creating their own cohesive frameworks and planning procedures around these resources, providing a starting point to guide these complex decisions.

Local governments are 'at different levels of maturity in practice, capacity, and data/intelligence' and as such often fail to capture the full spectrum of their communities, particularly remote regions, both in impact assessment and provision of assistance. Capturing statistically significant data that shows the impact of water, energy and food security on these communities is difficult as they are often excluded due to connectivity and logistical challenges, even though these resources are more likely to be closely shared within them. State departments need to take a governing approach when it comes to rectifying these communication and data issues, this will include resourcing and investing in updated data collection and modelling across all catchments and communities. All departments and local governments can have a positive impact in improving interconnection between resources if the governance issues are rectified to an acceptable standard and processes put in place to ensure strong industry engagement.

Yours sincerely

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